

IN THE CLAIMS

D1 Claim 1. (Canceled)

<sup>1</sup>  
Claim ~~2~~. (Currently amended) A memory storage disk handling system,  
comprising:

a housing;

an elevator pin mounted on the housing for lifting disks;

a servo motor attached to the housing; ~~and, wherein the servo motor includes~~  
~~a shaft, the linkage assembly includes an arm mounted on the shaft, whereby rotation of the~~  
~~shaft pivots the arm to lift the elevator pin; and~~

a linkage assembly attached between the servo motor and the elevator pin,  
wherein the servo motor includes a shaft, the linkage assembly includes an arm mounted on  
the shaft, whereby rotation of the shaft pivots the arm to lift the elevator pin.

<sup>2</sup>  
Claim ~~3~~. (Original) A memory storage disk handling system as set forth in claim  
~~2~~, wherein the arm has a fixed end and a moveable end, the fixed end mounts on the shaft,  
and the moveable end includes a cam surface that cams against the elevator pin when the  
arm pivots.

<sup>3</sup>  
Claim ~~4~~. (Currently amended) A memory storage disk handling system as set forth  
in claim ~~3~~, wherein the elevator pin has ~~and~~ an axis, and a base that lies in a plane  
perpendicular to the axis, the elevator pin includes a slot that parallels the base, the cam  
surface cams within the slot to lift the elevator pin in the direction of the axis.

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Claim ~~5~~ (Original) A memory storage disk handling system as set forth in claim ~~2~~, wherein the elevator pin has an axis, a longitudinal surface and a cam pin extending radially outward from the longitudinal surface, the moveable end of the arm defines a slot that cams against the cam pin when the arm pivots.

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Claim ~~6~~ (Original) A memory storage disk handling system as set forth in claim ~~2~~, wherein one end of the arm mounts on the shaft and the other end of the arm mounts on the elevator pin, the elevator pin has an axis, the servo motor pivots the arm to lift the elevator pin in the direction of the axis and the elevator pin rotates about the axis when the arm lifts the elevator pin.

Claim 7. (Canceled)

Claim 8. (Canceled)

Claim 9. (Canceled)

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Claim ~~10~~ (Currently amended) A memory storage disk handling system comprising:

a housing defining a hopper for receiving disks;  
an elevator pin mounted on the housing for lifting disks into the hopper; and  
the hopper being configured for aligning lifted disks into a stack and includes at least one pawl for holding lifted disks in the hopper, wherein the hopper includes a plurality of posts oriented to surround lifted disks, at least one pawl mounts on each post.

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Claim <sup>10</sup>~~11~~. (Currently amended) A disk handling system as set forth in claim <sup>9</sup>~~10~~, wherein each of the plurality of posts ~~the hopper~~ includes hollow portions and at least two pawls, the pawls being slidably mounted within the hollow portions.

<sup>13</sup>  
Claim ~~12~~. (Currently amended) A memory storage disk handling system ~~as set forth in claim 10~~ comprising:

a housing defining a hopper for receiving disks;  
an elevator pin mounted on the housing for lifting disks into the hopper; and  
the hopper being configured for aligning lifted disks into a stack and includes  
at least one pawl for holding lifted disks in the hopper, wherein the hopper includes three posts oriented to surround lifted disks, at least one pawl mounts on each post.

<sup>14</sup>  
Claim ~~13~~. (Original) A disk handling system as set forth in claim <sup>13</sup>~~12~~, wherein each post includes a hollow portion, the pawls being mounted at least partially within the hollow portions of the posts.

<sup>15</sup>  
Claim ~~14~~. (Original) A disk handling system as set forth in claim <sup>14</sup>~~13~~, wherein the pawls are slidably mounted within the hollow portions of the posts so that lifting a disk slides the pawls into the hollow portions, and after the disk is lifted, the pawls extend from the hollow portions to hold the disk in the hopper.

<sup>11</sup>  
Claim ~~15~~. (Previously Presented) A disk handling system as set forth in claim <sup>10</sup>~~11~~, wherein each pawl includes a slot and the hopper includes pins that insert through the slots to hold each pawl, the pins and slots cooperate to enables the pawls to slide.

<sup>12</sup>  
Claim ~~16~~. (Original) A disk handling system as set forth in claim <sup>10</sup>~~11~~, wherein each pawl includes an end with a hook for holding lifted disks.

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<sup>16</sup>  
Claim ~~17~~. (Currently amended) A memory storage disk handling system,  
comprising:

a housing defining a hopper for holding disks;  
an elevator pin mounted on the housing for lifting disks into the hopper;  
a servo motor attached to the housing;  
a linkage assembly attached between the servo motor and the elevator pin for  
lifting the elevator pin in response to the servo motor; and

the hopper defines a base and includes a stack retainer means extending from  
the base for aligning disks in a vertical stack, the stack retainer means includes more than  
one pawl for holding lifted disks, wherein the hopper includes a plurality of posts oriented  
to surround lifted disks, at least one pawl mounts on each of the plurality of posts.

<sup>17</sup>  
~~16~~ Claim ~~18~~. (Original) A memory storage disk handling system as set forth in claim  
~~17~~, wherein the servo motor includes a shaft, the linkage assembly includes a single arm  
mounted on the shaft.

<sup>18</sup>  
Claim ~~19~~. (Currently amended) A memory storage disk handling system ~~as set  
forth in claim 18~~ comprising:

a housing defining a hopper for holding disks;  
an elevator pin mounted on the housing for lifting disks into the hopper;  
a servo motor attached to the housing;  
a linkage assembly attached between the servo motor and the elevator pin for  
lifting the elevator pin in response to the servo motor, the servo motor includes a shaft, the  
linkage assembly includes a single arm mounted on the shaft, wherein the arm has a fixed  
end and a moveable end, the fixed end is fixed with respect to the shaft, the moveable end  
includes a cam surface that cams against the elevator pin to enable the elevator pin to move  
in response to the servo motor; and

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the hopper defines a base and includes a stack retainer means extending from the base for aligning disks in a vertical stack, the stack retainer means includes more than one pawl for holding lifted disks.

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Claim ~~20~~<sup>19</sup>. (Original) A disk handling system as set forth in claim ~~19~~<sup>18</sup>, wherein the stack retainer means includes three posts oriented to surround lifted disks, each post includes a hollow portion, the pawls normally extend from the post and retract within the hollow portions of the posts when a disk lifts past the pawls.

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Claim ~~21~~<sup>20</sup>. (Currently amended) A memory storage disk handling system, comprising:  
a housing;  
an elevator pin mounted on the housing, wherein the elevator pin presses a single disk into a stack of disks;  
a servo motor attached to the housing;  
a base having a position sensor; and  
a linkage assembly between the servo motor and the elevator pin, wherein the servo motor includes a shaft, the linkage assembly includes an arm mounted on the shaft, whereby rotation of the shaft pivots the arm to lift the elevator pin.

21  
Claim ~~22~~<sup>21</sup>. (Previously presented) A memory storage disk handling system as set forth in claim ~~21~~<sup>20</sup>, wherein the position sensor includes a mechanical arm, the arm engages the elevator pin to detect elevator pin position.

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Claim ~~23~~<sup>22</sup>. (Previously presented) A memory storage disk handling system as set forth in claim ~~21~~<sup>20</sup>, wherein the position sensor includes an optical sensor element.

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Claim <sup>23</sup>~~24~~. (Previously presented) A memory storage disk handling system as set forth in claim <sup>30</sup>~~21~~, wherein the position sensor includes a magnetic sensor element.

*E*  
Claim <sup>6</sup>~~25~~. (Currently amended) A memory storage disk handling system as set forth in claim ~~1~~ <sup>2</sup>, wherein the ~~stack of disks has~~ a top and a bottom, and wherein <sup>the</sup> ~~the~~ single disk is added to the bottom of the stack.

Claim <sup>7</sup>~~26~~. (Currently amended) A memory storage disk handling system as set forth in claim ~~1~~ <sup>2</sup>, further comprising a conveyor.

*E*  
Claim <sup>8</sup>~~27~~. (Previously presented) A memory storage disk handling system as set forth in claim <sup>1</sup>~~26~~, wherein the conveyor delivers disks to the memory storage <sup>disk</sup> ~~device~~ handling system for the elevator pin to stack the delivered disks into a stack.

Claim <sup>24</sup>~~28~~. (Previously presented) A memory storage disk handling system, comprising:

a housing defining a hopper for holding disks in a stack;  
an elevator pin mounted on the housing for lifting disks into the hopper; and  
a plurality of pawls for holding disks, wherein the plurality of pawls slide between a retracted position which enables the elevator pin to lift disks into the stack and an extended position for holding disks, wherein the housing includes a plurality of posts oriented to surround lifted disks, and at least one pawl mounts on each post.

Claim <sup>25</sup>~~29~~. (Previously presented) A disk handling system as set forth in Claim <sup>24</sup>~~28~~, further comprising a servo motor and a linkage assembly, wherein the linkage assembly is attached between the servo motor and the elevator pin for lifting the elevator pin in response to the servo motor.

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*conch* Claim <sup>28</sup>~~30~~. (Previously presented) A disk handling system as set forth in Claim <sup>26</sup>~~28~~,  
wherein the disks are retained in a vertical stack.

Claim <sup>26</sup>~~31~~. (Previously presented) A disk handling system as set forth in Claim <sup>25</sup>~~29~~,  
wherein the linkage assembly includes at least one belt and at least one pulley.

Claim <sup>27</sup>~~32~~. (Previously presented) A disk handling system as set forth in Claim <sup>25</sup>~~29~~,  
wherein the linkage assembly is a gear linkage assembly.

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